**3.b.1-3**

**Group Members: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**atmosphere and Meteorology Project**

**General Directions**: Your group will be given three of the Virginia Beach Objectives related to this unit. Your group will be responsible for **researching the objectives, creating a lesson and developing an activity** to teach the three objectives you have been assigned to the rest of the class. Guiding questions have been provided to help you cover each objective. You will be using a PowerPoint slideshow to use as a visual aid to teach the lesson.

**Step 1**: Research your objective using books and resources provided (Databases located at <https://destiny.vbcps.com> and books). Take notes. Be sure to answer the guiding questions in a way that you can easily explain to your classmates. Diagrams, charts and graphs are great tools to visually interpret information. Collect citation information and save to a location you can access (jump drive, H Drive or SharePoint).

**Step 2:** Organize your information so that you can easily share it with others. Develop a PowerPoint presentation with your group to cover your topic. All group members must contribute to the PPT and participate in the presentation. Use the following format as a template for your PowerPoint.

PowerPoint format :

Slide 1-State Key Concept/Topic

Slide 2:  State objective

Slide 3-4:  Guiding Question with 3-5 bullet points

Slide 5:  State Objective

Slide 6-7:  Guiding Question with 3-5 bullet points

Slide 8:  State Objective

Slides 9-10:  Guiding Question with 3-5 bullet points

Slide 11:  Bibliography

Relevant photos/pictures throughout

**Step 3:** Develop an activity to be used by classmates during lesson. All group members must contribute to the activity.

Fill-in-the-Blank: Ten numbered sentences with one critical word or phrase missing from each.

**Step 4:** As a group practice teaching your lesson. Remember to use the PowerPoint as a guide but do not read it to the class

**ES3.b Atmospheric Properties**

**3.b.1 Define the three methods of heat transfer in the atmosphere: conduction, convection, and radiation. Label a diagram that illustrates the interaction of Earth’s atmosphere and energy transfer.**

*What are conduction, convection, and radiation?*

*How do these three methods of heat transfer impact the atmosphere?*

*Create a diagram for each method of energy transfer and label the key information.*

**3.b.2 Explain that convection is the major mechanism of energy transfer in the oceans, atmosphere and Earth’s interior.**

*What is convection?*

*How does convection create movement on the surface of the Earth?*

*How does convection create movement below the surface of the Earth?*

**3.b.3 Explain the significance of the angle of insolation with respect to the amount of energy reaching the Earth’s surface (latitude, season and time of day).**

*What is the angle of insolation?*

*How does the angle of insolation change throughout the year?*

*What is the impact on the Earth of this change?*

Fast Facts:

-Temperature differences produce differences in density which produces convection.

-Convection is the major mechanism of energy transfer in the oceans, atmosphere, and Earth’s interior.

-Convection in the atmosphere is a major cause of weather.

-The amount of energy reaching any given point on Earth’s surface is controlled by the angle of sunlight striking the surface and varies with the seasons.